

A Comparative Study of Scientific Temper of Government and Private Secondary School Students

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Abstract: The present investigation has been undertaken to study the scientific temper of government and private secondary school students. Tool used for the investigation consists of N.A Nadeem and Showkat wani scientific temper scale. Sample comprises of government and private secondary schools of Zone Hawal of district Srinagar of Kashmir, 200 (100 governments and 100 private) secondary students were randomly selected from these schools. The data collected was analyzed by t- test. It was found that on curiosity, objectivity, rationality, Aversion to superstition dimension of scientific temper scale, which indicates that government and private secondary students do not differ on curiosity

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1. Introduction

We are living in an era of science and technological development. Science has radically changed mans material environment. It has lead to material and a non material development. Science and technology have fostered a new intellectual temper known as Scientific Temper. Today the age of science is full upon us. Apart from the benefits conferred on mankind to make material life more comfortable, science is collaborating in mass. According to Prof. P L Dhar Inquisitiveness is a fundamental trait of human beings. From times immemorial man has tried to comprehend the world in which he finds himself. The knowledge gained through observation of natural occurrences increases. According to Columbia dictionary "science is a accumulated and systematized learning in general usage restricted to natural phenomenon. The progress of science is marked not only by an accumulation of fact, but by the emergence of scientific method and scientific temper.

Scientific temper describes an attitude which involves the application of logic and the avoidance of bias and preconceived notions. Discussion, argument and analysis are vital parts of scientific temper. It is thus necessarily open — admitting every point of view. Gandhiji tells us: All selfish desires are immoral, while the desire to improve ourselves for the sake of doing well to others is truly moral. The highest moral law is that we should unremittingly work for the good of mankind.

Need and Importance of Scientific Temper

It is essential for the country's development that its citizens develop scientific temper, meaning doing things in a logical and reasonable fashion not biased by

unscientific beliefs etc. Fortunately this trait is common in today's society. It has to be maintained or promoted so that whenever we face a situation we can reach the right conclusions and take the right actions. When each of us realize how crucial that can be, we will grasp the importance of scientific temper in India for moving forward. It is inconsequential, if not frivolous, to enter into any dialogue of delinking science from religion, faith, superstition and other such entities. This is the favorite past time of some modernists, and that brand which prefers to call itself rationalist. Usually, true scientific temper does not have to make any conscious attempt to delink itself from anything. The delinking is automatic. Anything that is not objectively verifiable, that cannot be experimentally proved and does not have the possibility of replication, cannot fall within the purview of scientific investigation or research. Essential requirement of Scientific Temper is the attitude of not accepting answers without scrutiny. Superstitions are born out of ignorance of how Nature functions. Science is dedicated to the unraveling of the mysteries of Nature. As on particular mystery is solved, we should expect the superstitions based on it to disappear. Yet, this does not always happen in practice because of the lack of scientific outlook in the typical human being. Present investigation i.e., study of Scientific Temper of government and private secondary school students help the administrator like curriculum frame workers etc. to frame curriculum in such a way that develops the Scientific Temper, logic, reasoning, rational thinking among the students as the national development and productivity gets base in class rooms.

Statement of the Problem

The problem selected for the purpose of present study or investigation read as:

A comparative study of Scientific Temper of government and private secondary school students**Objectives:**

1. To study the scientific temper of government and private secondary schools.

2. To compare government and private secondary school students on various dimensions of scientific temper.

Hypothesis:

1. Government and private secondary school students differ significantly on various dimensions of scientific temper

Operational Definition of Variable:

Scientific Temper for the present study shall be defined as the scores obtained on various dimensions of Scientific Temper scales by N. A. Nadeem and Showkat Wani.

Sample:

The sample for the present study comprised of Secondary school students, both private and government of district Hawal of Srinagar. The procedure of drawing the sample is reported as under;

A preliminary survey was conducted to identify the Scientific Temper of two groups of secondary school students viz, government and private. The total number of students falling in these categories was found to be 50 (25 boys and 25 girls), 50 (25 boys and 25 girls) respectively.

S.No	Name of Govt. Institution	Boys	Girls
1	GHS Baghwanpora	-	03
2	BHS Amda Kadal (Co-ed)	05	05
3	BHS Lal Bazar (Co-ed)	-	02
4	GHS Zadibal	-	15
5	BHS Zadibal	05	-
6	BHS Soura	15	-
	Total	25	25

S.No	Name of Private Schools	Boys	Girls
1	Standard Public High School, Gasiyar	05	05
2	Standard Public High School, M.K. Sahib	05	05
3	Shaheen Public High School, Gasiyar	05	05
4	Mother Land High School, 90 Feet Road, Soura	05	04
5	Green Land	01	03
6	Gay Way School, Near Firdous Cinema	04	03
	Total	25	25

Description of the tools:

For the measurement of Scientific Temper of secondary school students Professor Nadeem and Showkat Wani's Scientific Temper Scale was administered. This is the 50 item scale with 3 points rating and measures Scientific Temper with reference to five important aspects viz Curiosity, Rationality, Objectivity, Open Mindedness and Aversion to Superstition.

Statistical Treatment

The data was analyzed by 't' test.

Table 1:- Significance of mean difference between government and private secondary school students (N=50 each group) on factor curiosity.

Group	Mean	S.D.	t-value	Significance
Private Students	7.8	1.29	0.775	Not Significant
Government Students	7.6	1.32		

The perusal of above table makes it clear that there is no significant mean difference between government and private Secondary school students on factor curiosity of Scientific Temper. However, mean score favors Private secondary school students (7.8) which show that private secondary school students are more curious than their counter parts, but the difference failed to arrive at any level of confidence

Table 2:- Significance of mean difference between Private and Government Secondary School students (N=50 each group) on factor open mind.

Group	Mean	S.D.	t-Value	Significance
Private Students	6.08	1.71	3.35	Significant at 0.01 Level
Government Students	7.12	1.68		

The perusal of above table makes it clear that there is significant mean difference between Government and Private Secondary School students in factor Open Mindedness of Scientific Temper. The obtained t-value is 3.35 which are statistically significant at 0.01 levels. However, mean score favors Government Secondary School students (3.35) which show Government Secondary School students are found to be more open minded, objective, practical and mostly deal with facts.

Table 3:- Significance of mean difference between Private and Government Secondary School students (N=50 each group) on factor Objectivity.

Group	Mean	S.D.	t-value	Significance
Private Students	8.36	1.33	1.28	Not Significant
Government Students	8.72	1.61		

The perusal of above table makes it clear that there is no significance mean difference between Government and Private Secondary School students in factor Objectivity of Scientific Temper. However, mean score favors Government Secondary School students (1.28) which show Government Secondary School students are found to be more objective, practical, relate themselves with facts and believe on experiments.

Table 4:- Significance of mean difference between Private and Government Secondary School students (N=50 each group) on factor Rationality.

Group	Mean	S.D.	t-value	Significance
Private Students	7.42	1.49	1.33	Not Significant
Government Students	6.98	1.92		

The perusal of above table makes it clear that there is no significant mean difference between Government and Private Secondary School students in factor Rationality of Scientific Temper. Both the groups are same on rationality dimension, which show that Private Secondary School students are found to be more rational than their counter parts, but the difference failed to arrive at any level of confidence.

The perusal of above table makes it clear that there is no significant mean difference between Government and Private Secondary School students in factor Aversion to Superstition of Scientific Temper. However, mean score favors Private Secondary School students (4.44) which show that Private Secondary School students are found to be more superstitious than

their counter parts, but the difference failed to arrive at any level of confide.

Table 5:- Significance of mean difference between Private and Government Secondary School students (N=50 each group) on factor Aversion to Superstition.

Group	Mean	S.D.	t-value	Significance
Private Students	4.44	1.87	0.70	Not Significant
Government Students	4.20	1.81		

The main conclusions of the study are as under:

1. It was found that there is no significant mean difference between private and government Secondary School students on dimension of Curiosity. Both the groups are equally curious.

2. It was found that Government School students are more Objective, Practical and deal mostly with facts.

3. It was found that Government and private Secondary School students are equally Objective, Practical and relate themselves with experiments.

4. It was found that private and government Secondary School students are more Rational.

5. It was also found that Private Secondary School students are more superstitious than the Government Secondary School students.

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